

Please add new Claim 5 as follows:

5. (New) The device according to Claim 3, wherein the electronic evaluation system is further configured to compare the signals emitted by the sensor in the air on the surface of the ground and to evaluate on the basis of the compared signals the presence and concentration of MTBE in the surface layers or depths of the ground and in the atmosphere above the ground itself.

#### REMARKS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-5 are presently active in this case. Claims 1-4 have been amended and Claim 5 has been added by way of the present amendment.

In the outstanding Office Action, Claims 1-4 were rejected under 35 U.S.C. § 112, second paragraph, for being indefinite; Claim 3 was rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent Number 5,811,662 to Williams et al.; and Claim 4 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Williams et al. in view of U.S. Patent Number 5,573,728 to Loesch et al.

Applicants acknowledge with appreciation the indication that Claims 1 and 2 would be allowable if rewritten to overcome the rejections under 35 U.S.C. § 112, second paragraph. Regarding the rejection of Claim 1 under 35 U.S.C. § 112, second paragraph, Applicants have amended Claim 1 in order to clarify that the sensors "comprise" two components rather than "consists" of two components.

Regarding the evaluating step of Claim 1, the Office Action asserts on page 2, section 3 that Claim 1 "fails to set forth how the comparison is to be used in determining the presence and concentration of MTBE." Applicants respectfully traverse that assertion. Applicants respectfully submit that Claim 1 is definite in that it is clear that the presence and

concentration of MTBE is based on the comparison of signals emitted by the series of sensors. Whether claim 1 sets forth how the comparison is accomplished is irrelevant to a 35 U.S.C. § 112, second paragraph, analysis. However, Applicants point out that page 5, lines 5-13 of the specification describe how the comparison is accomplished. No further rejection on this basis is therefore anticipated. Hence, Claims 1 and 2 are believed to be allowable.

Briefly recapitulating, the present invention (Claims 3-5) is directed to a device for determining MTBE vapors. The device includes a series of sensors wherein each sensor comprises a sensitive element produced with a 40 micron layer of semiconductor metal oxide and a heater capable of bringing the temperature of the sensor development to a range of 300 to 500°C. At least one of the sensors is equipped with a membrane permeable to gasses and impermeable to water for the protection of the sensitive element.

In contradistinction thereto, the Williams et al. patent is directed to a sensor for detecting ozone. Nowhere does the Williams et al. patent teach that it is suitable for *function* determining MTBE vapors. Moreover, the Williams et al. patent does not teach or suggest that the heating element 78 is capable of bringing the temperature of the sensor to between 300 and 500°C. Likewise, the Williams et al. patent does not teach or suggest a semi-permeable membrane configured to protect the sensor. Nowhere does the Williams et al. patent teach or suggest that the cap 102 permits gasses to pass therethrough yet is *inherent* impermeable to water. Finally, the Williams et al. patent does not teach a configuration where a series of sensors are utilized. *Col. 4, lines 8-13*

The Loesch et al. patent does not address any of the shortcomings of the Williams et al. patent. Hence, the Williams et al. patent is not believed to anticipate or render obvious the claimed invention (claims 3-5) when considered alone or in combination with the Loesch et al. patent.

In light of the above discussion, it is respectfully submitted that Claim 3 is patentably distinguishable from the applied patents, the dependent Claims 4 and 5 are also patentably distinguishable from the applied patents.

Consequently, in view of the present amendment, no further issues are believed to be outstanding in the present application, and the present application is believed to be in condition for formal allowance. An early and favorable action is therefore respectfully requested.

Respectfully submitted,

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IN THE CLAIMS

--1. (Amended) A process for determining methyl ter butyl ether (MTBE) vapours, in concentrations equal to or higher than 0.1 ppm, in the ground and overlying atmosphere comprising:

a) adopting a series of MTBE vapour sensors of which at least one in the earth, equipped with a membrane permeable to gases and impermeable to water, and at least one in the air on the surface of the ground, these sensors [consisting of] comprising

- a sensitive element made of a semi-conductor metal oxide containing platinum; and

- a heater capable of bringing the temperature of said sensitive element to a range of 300 and 500°C;

b) - continuously observing the resistance variations of the sensitive elements by interaction with MTBE,

- comparing the signals emitted by the sensor in the earth and the sensor in the air on the ground-surface; and

- evaluating on the basis of this comparison the presence and concentration of MTBE in the surface layers or depths of the ground and in the atmosphere above the ground itself.

2. (Amended) The process according to claim 1, [characterized in that] wherein the sensitive element is produced with tin oxide.

3. (Amended) A device for determining methyl ter butyl ether (MTBE) vapours comprising:

a) a series of sensors of MTBE vapours [consisting of] each comprising a sensitive element produced with

- a 40 micron layer of semiconductor metal oxide containing 1% by weight of platinum,

- a heater capable of bringing the temperature of said sensitive element to a range of 300 to 500°C,

at least one of said sensors being equipped with a membrane permeable to gases and impermeable to water for the protection of said sensitive element;

b) an electronic evaluation system[, capable of] configured to

[-] continuously [recording] record the variations in resistance of the sensitive elements by interaction with MTBE[,

- comparing the signals emitted by the sensor in the ground and the sensor in the air on the surface of the ground,

- evaluating on the basis of this comparison the presence and concentration of MTBE in the surface layers or depths of the ground and in the atmosphere above the ground itself].

4. (Amended) The device according to claim 3, [characterized in that] wherein the semiconductor metal oxide is tin oxide.

5. (New).--